

**NL INDUSTRIES/TARACORP SUPERFUND SITE GROUP**

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February 25, 2005

**First Class Mail**

Mr. Brad Bradley  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

**RE: NL Industries/Taracorp Superfund Site; Granite City, Illinois  
Abandonment of Groundwater Monitoring Wells**

Dear Mr. Bradley:

As you know, the NL/Taracorp Superfund Site Group ("Group") submitted a document to the U.S. Environmental Protection Agency ("EPA") in August 2003 that was entitled "2003 Annual Groundwater Monitoring Report, NL Industries/Taracorp Superfund Site, Granite City, Illinois." The report, which was prepared by ARCADIS G&M, Inc. ("ARCADIS") on behalf of the Group, presented the results of the annual groundwater monitoring event conducted at the NL Industries/Taracorp Superfund Site in March 2003. The following modifications to the groundwater monitoring program were included within the report:

- Future sampling should be limited to the monitoring wells within the property boundaries of the Main Industrial Site;
- The off-site downgradient well nests installed at the Granite City Steel facility (GMMW-115, GMMW-124, and GMMW-125) and the Terminal Railroad of St. Louis property (GMMW-116) should no longer be sampled as part of the future monitoring program; and
- The Remote Fill Area wells (GMMW-117, GMMW-118, and GMMW-119 in Venice Township; and GMMW-120, GMMW-121, and GMMW-122 in Eagle Park Acres) should be eliminated from the future monitoring program.

Mr. Brad Bradley  
February 25, 2005  
Page 2

ARCADIS also recommended in the report that the frequency of groundwater monitoring at the Main Industrial Site be reduced to one monitoring event every five years, to be performed in conjunction with EPA's future five-year reviews. In an October 2, 2003 letter (copy enclosed), EPA approved the three modifications to the groundwater monitoring program. The Group subsequently provided a letter (copy also enclosed) to EPA on October 29, 2003 to confirm EPA's approval of the reduced monitoring frequency.

Because sampling of the off-site downgradient groundwater monitoring wells on the Granite City Steel (now National Steel) and Terminal Railroad of St. Louis properties is no longer required, and because sampling the remote fill area monitoring wells in Venice Township and Eagle Park Acres is also no longer required, the Group is seeking EPA's authorization to abandon those monitoring wells. Specifically, the Group is seeking EPA's authorization to abandon the 13 groundwater monitoring wells listed in Table 1 that are no longer part of the long-term monitoring program.

The Group is also seeking EPA's authorization to abandon six additional groundwater monitoring wells at the Main Industrial Facility. The six additional monitoring wells that the Group is seeking to abandon at the Main Industrial Facility, and the justifications for the proposed abandonments, are listed in Table 2.

If EPA approves the Group's request to abandon the 18 monitoring wells identified on Tables 1 and 2, the long-term groundwater monitoring program at the site will involve the sampling of the 16 groundwater monitoring wells listed in Table 3 and shown on Figure 1. For ease of comparison, the current locations of monitoring wells at the Main Industrial Site are shown on Figure 2. The long-term monitoring wells will be sampled in conjunction with EPA's next five-year review.

Upon receipt of EPA's authorization to proceed with the abandonment of the 18 monitoring wells listed in Table 1 and Table 2, the Group will notify property owners of the Group's plans to abandon the monitoring wells. After the property owners have been notified, ARCADIS and its subcontractor will mobilize to the site to abandon the monitoring wells.

The monitoring wells will be abandoned according to the Illinois Water Well Construction Code (77 Ill. Adm. Code 920, Section 920.120) by a licensed water well driller under the supervision of ARCADIS. The following procedures will be followed during well abandonment activities for monitoring wells GMMW-116S, GMMW-116D, GMMW-117, GMMW-118, GMMW-119, GMMW-120, GMMW-121, GMMW-122, MW-106S, MW-112S, MW-112D, MW-123, and MW-126:

- The total depth of each well will be gauged prior to backfilling with bentonite chips to determine the correct amount of seal material required.
- An attempt will be made to pull the entire monitoring well from the subsurface. In the event the entire well casing cannot be pulled from the subsurface, the PVC well casing will be removed at least two feet below land surface.
- A one-inch PVC pipe will be lowered into the well or borehole to prevent bridging of the backfill material. The bentonite chips will be slowly poured into the well.
- A six-inch to one-foot thick concrete cap will be poured two feet below land surface on top of the removed well casing with a diameter larger than the well casing or borehole.
- The stickup or flush mount well cover will be removed and the ground surface will be returned to existing conditions.

The following procedures will be followed during well abandonment (overdrilling) activities for monitoring wells GMMW-115S, GMMW-115D, GMMW-124S, GMMW-124D, and GMMW-125 located on National Steel property:

- An attempt will be made to pull the entire monitoring well from the subsurface. In the event the entire well casing cannot be pulled from the subsurface, the well will be overdrilled with a hollow stem auger rig.
- After well removal, a one-inch PVC pipe will be lowered into the borehole to prevent bridging of the backfill material. The bentonite chips will be slowly poured into the well.
- The stickup or flush mount well cover will be removed and the ground surface will be returned to existing conditions.

Upon completion of monitoring well abandonment activities, ARCADIS will prepare a monitoring well abandonment report for submission to EPA. The report will document the abandonment of each monitoring well with written text and photographs.

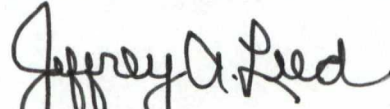
The Group will advise EPA with the schedule for completing various well abandonment activities.

Mr. Brad Bradley  
February 25, 2005  
Page 4

The Group would appreciate receiving EPA's authorization to proceed with the abandonment of the monitoring wells listed in Table 1 and Table 2. Please contact this office if you have questions, comments, or need additional information or clarification. Thank you.

Very truly yours,

**LEED ENVIRONMENTAL, INC.**



Jeffrey A. Leed  
Project Coordinator

enclosures

cc: Mr. Doyle Wilson – Illinois EPA (w/enclosures, by first class mail)  
Mr. Jack Kratzmeyer – ARCADIS (w/enclosures, by first class mail)  
Technical Committee, NL Industries/Taracorp Superfund Site Group  
(w/enclosures, by first class mail)

**Table 1**  
**NL/Taracorp Superfund Site**  
**Monitoring Wells No Longer Part of the Long-Term**  
**Monitoring Program and Proposed for Abandonment**

<b>Monitoring Well</b>	<b>Location</b>
GMMW-115S	Main Industrial – National Steel
GMMW-115D	Main Industrial – National Steel
GMMW-116S	Main Industrial – Terminal RR
GMMW-116D	Main Industrial – Terminal RR
GMMW-117	Venice Township
GMMW-118	Venice Township
GMMW-119	Venice Township
GMMW-120	Eagle Park Acres
GMMW-121	Eagle Park Acres
GMMW-122	Eagle Park Acres
GMMW-124S	Main Industrial – National Steel
GMMW-124D	Main Industrial – National Steel
GMMW-125	Main Industrial – National Steel

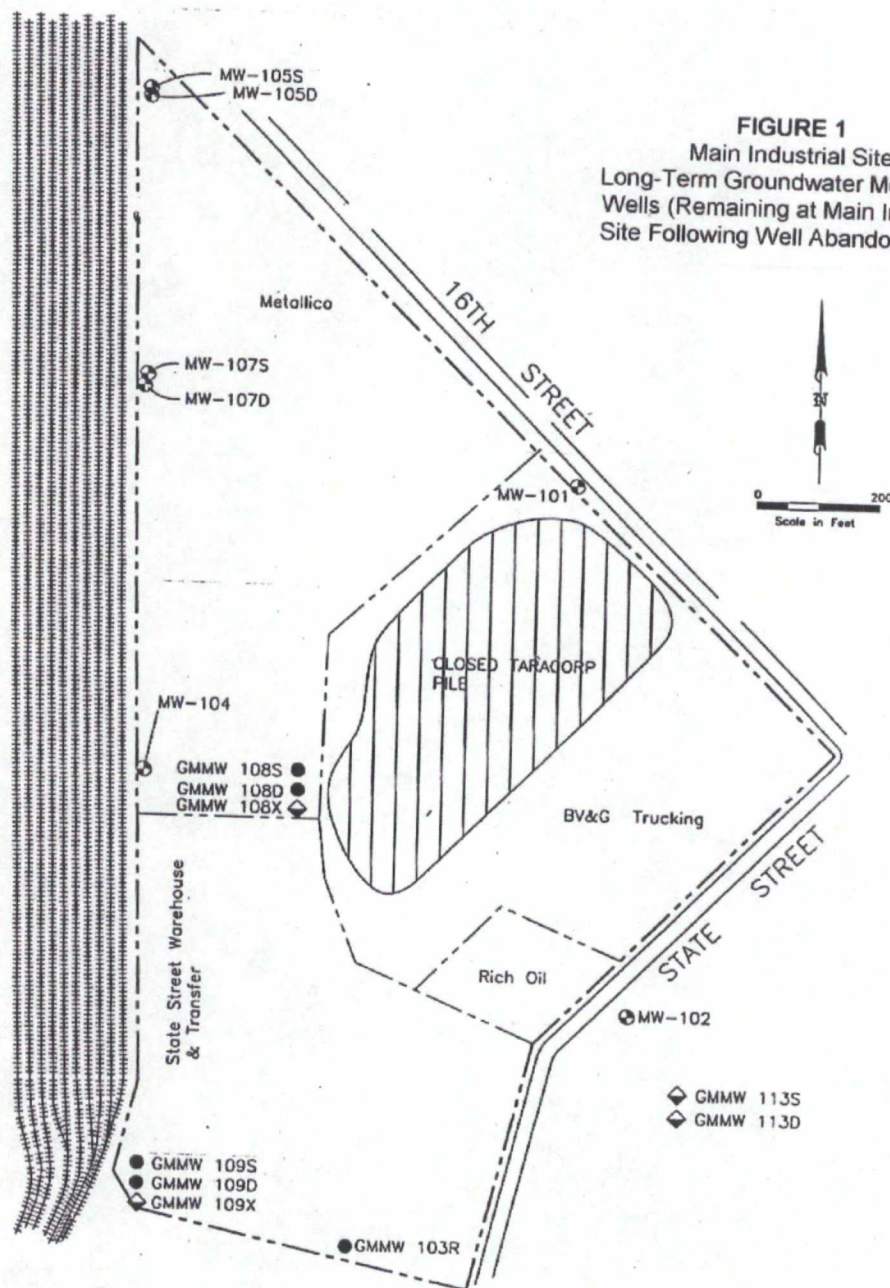
**Table 2**  
**NL/Taracorp Superfund Site**  
**Additional Monitoring Wells Proposed for Abandonment**

<b>Monitoring Well</b>	<b>Location</b>	<b>Justification</b>
GMMW-106D	Main Industrial – Metalico	Groundwater samples collected from this well in 2001, 2002, and 2003 contained nondetectable concentrations of lead, zinc, and cadmium.
GMMW-106S	Main Industrial – Metalico	Historically, GMMW-106S has been a dry well. During the March 2003 sampling event, the water level measurements in GMMW-106S indicated a 3 ½-inch water column when the well was first sounded. During development, the well could not be properly evacuated, and it was determined that the integrity of GMMW-106S had been breached. While purging the well, the evacuated volumes continued to consist of at least 25% sands and it appeared that sand was continuously “flowing” into the well bottom. These observations were attributed to filter pack entering the monitoring well through damaged well screen. Groundwater samples collected from this well would not be representative of aquifer conditions.
GMMW-112S	Main Industrial – State Street Warehouse & Transfer	Groundwater samples collected from this well in 2001, 2002, and 2003 contained nondetectable concentrations of lead, zinc, and cadmium. Other monitoring wells are located farther down-gradient.
GMMW-112D	Main Industrial – State Street Warehouse & Transfer	Groundwater samples collected from this well in 2001, 2002, and 2003 contained nondetectable concentrations of lead, zinc, and cadmium. Other monitoring wells are located farther down-gradient.
GMMW-123	Main Industrial – Martin & Bailey, Inc.	Groundwater samples collected from this well in 2001, 2002, and 2003 contained nondetectable concentrations of lead, zinc, and cadmium. Potential groundwater contamination would be detected by other monitoring wells at the Main Industrial Site.
GMMW-126	Main Industrial – Walnut Street (Granite City) near intersection with Niedringhaus Avenue	Groundwater samples collected from this well in 2001, 2002, and 2003 contained nondetectable concentrations of lead, zinc, and cadmium. Potential ground-water contamination would be detected by other monitoring wells at the Main Industrial Site.

**Table 3**  
**NL/Taracorp Superfund Site**  
**Monitoring Wells Remaining as**  
**Part of the Long-Term Monitoring Program**

<b>Monitoring Well</b>	<b>Location</b>
MW-101	Main Industrial – Metalico
MW-102	Main Industrial
GMMW-103R	Main Industrial – State Street Warehouse & Transfer
MW-104	Main Industrial – Metalico
MW-105S	Main Industrial – Metalico
MW-105D	Main Industrial – Metalico
MW-107S	Main Industrial – Metalico
MW-107D	Main Industrial – Metalico
GMMW-108S	Main Industrial – Metalico
MW-108D	Main Industrial – Metalico
GMMW-108X	Main Industrial – Metalico
GMMW-109S	Main Industrial – State Street Warehouse & Transfer
GMMW-109D	Main Industrial – State Street Warehouse & Transfer
GMMW-109X	Main Industrial – State Street Warehouse & Transfer
GMMW-113S	Main Industrial – John Obucina
GMMW-113D	Main Industrial – John Obucina

**FIGURE 1**  
Main Industrial Site  
Long-Term Groundwater Monitoring  
Wells (Remaining at Main Industrial  
Site Following Well Abandonments)



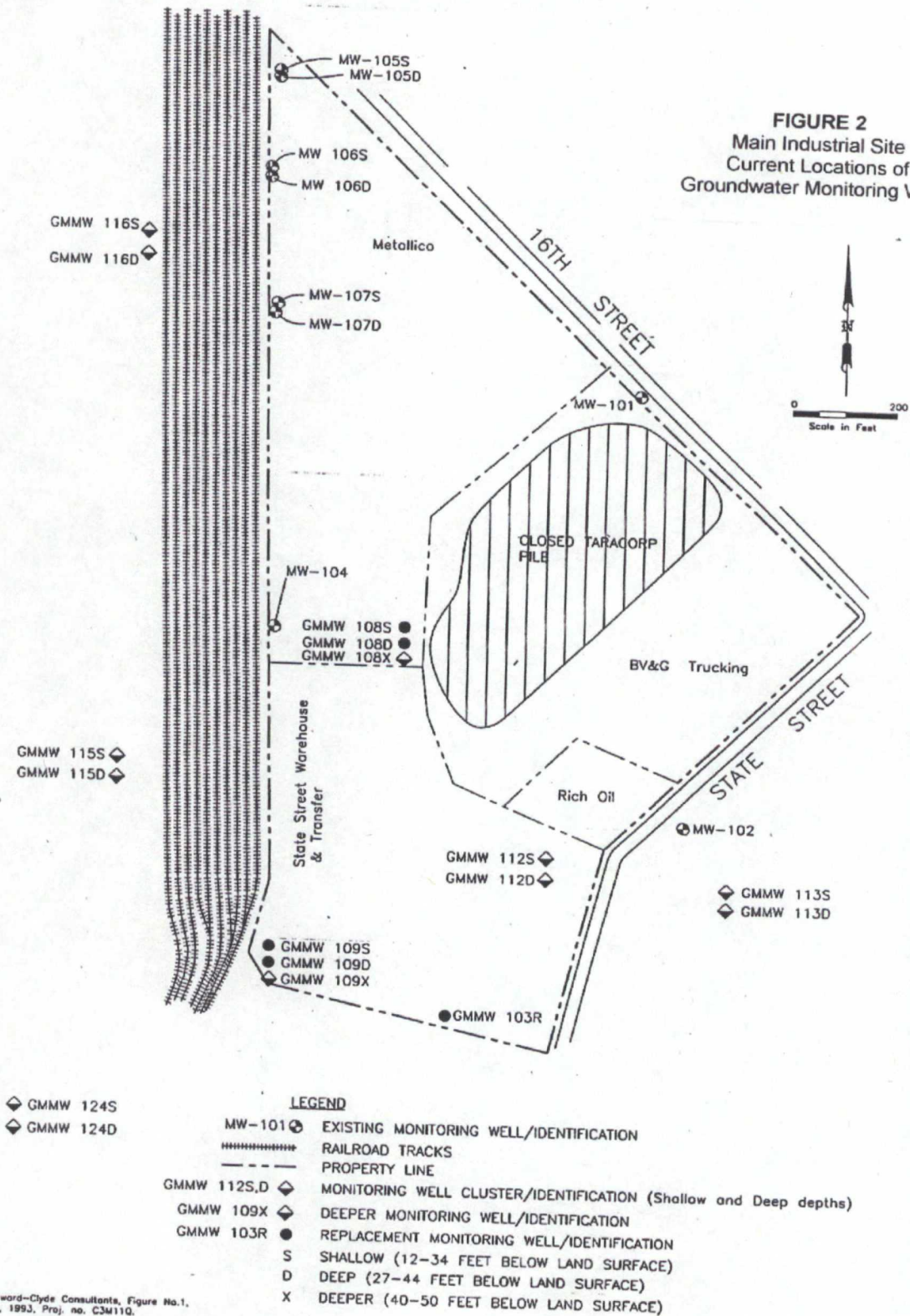
**LEGEND**

- MW-101 ● EXISTING MONITORING WELL/IDENTIFICATION
- ===== RAILROAD TRACKS
- PROPERTY LINE
- GMMW 112S,D ◆ MONITORING WELL CLUSTER/IDENTIFICATION (Shallow and Deep depths)
- GMMW 109X ◆ DEEPER MONITORING WELL/IDENTIFICATION
- GMMW 103R ● REPLACEMENT MONITORING WELL/IDENTIFICATION
- S SHALLOW (12-34 FEET BELOW LAND SURFACE)
- D DEEP (27-44 FEET BELOW LAND SURFACE)
- X DEEPER (40-50 FEET BELOW LAND SURFACE)

Source: Woodward-Clyde Consultants, Figure No.1,  
November 11, 1993, Proj. no. C3M110.

**FIGURE 2**  
Main Industrial Site  
Current Locations of  
Groundwater Monitoring Wells

SEE FIGURE 3 FOR LOCATION  
OF MONITORING WELL GMMW 125





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

October 2, 2003

Jeff Leed, Project Coordinator  
Leed Environmental, Inc.  
124 Deborah Drive  
Reading, PA 19610

Dear Mr. Leed:

The U.S. Environmental Protection Agency (EPA) has reviewed the following two documents: the "2003 Annual Groundwater Monitoring Report" and the September 5, 2003 "5 Year Review Final Report" for the NL Industries/Taracorp Superfund Site in Granite City, Illinois (the Site). EPA hereby approves both of these documents.

EPA would like confirmation from you that the required Operation and Maintenance activities outlined in Appendix E of the Five Year Review Final Report have, in fact, been completed. Also, EPA hereby approves the three modifications to the groundwater monitoring program at the Site, as outlined in your August 27, 2003 cover letter to the 2003 Annual Groundwater Monitoring Report.

If you have any questions concerning this letter, please contact me at (312) 886-4742.

Sincerely,

*Brad Bradley*  
Brad Bradley  
Remedial Project Manager

cc: Sandy Bron, Illinois EPA

**NL INDUSTRIES/TARACORP SUPERFUND SITE GROUP**

**Leed Environmental, Inc.**

**124 Deborah Drive**

**Reading, PA 19610**

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October 29, 2003

**First Class Mail**

Mr. Brad Bradley  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

**RE: NL Industries/Taracorp Superfund Site; Granite City, Illinois  
Groundwater Monitoring/O&M Activities**

Dear Mr. Bradley:

Thank you for your October 2, 2003 letter which: (1) approved ENTACT's "Five-Year Review Final Report" and ARCADIS' "2003 Annual Groundwater Monitoring Report" for the NL/Taracorp Site; and (2) approved modifications to the long-term groundwater monitoring program for the site.

As outlined in your letter and as we have subsequently discussed, the following modifications will be made to the long-term groundwater monitoring program:

- Future groundwater sampling will be limited to the 20 wells within the property boundaries of the Main Industrial Site;
- The off-site downgradient well nests installed at the Granite City Steel facility (GMMW-115, GMMW-124, and GMMW-125) and the Terminal Railroad of St. Louis property (GMMW-116) will be eliminated from the future monitoring program;
- The remote fill area wells (GMMW-117, GMMW-118, and GMMW-119 in Venice Township; and GMMW-120, GMMW-121, and GMMW-122 at Eagle Park Acres) will be eliminated from the future monitoring program; and
- The frequency of groundwater monitoring will be reduced from annually to one event performed every five years in conjunction with EPA's five-year reviews.

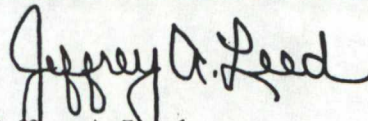
Mr. Brad Bradley  
October 29, 2003  
Page 2

Also, the NL/Taracorp Superfund Site Group has authorized ENTACT to perform operation and maintenance activities at the site to address the items outlined in Appendix E of ENTACT's "Five-Year Review Final Report." I will advise you as soon as ENTACT has provided its schedule for mobilizing to the site to perform the work.

Thank you for your assistance. Please advise if additional information or clarification is needed.

Very truly yours, - . .

**LEED ENVIRONMENTAL, INC.**



Jeffrey A. Leed  
Project Coordinator

cc: Ms. Sandra Bron - Illinois EPA (by first class mail)  
Mr. Jack Kratzmeyer - ARCADIS (by first class mail)  
Mr. Rich Wood - ENTACT, Inc. (by first class mail)  
Technical Committee, NL Industries/Taracorp Superfund Site Group  
(by first class mail)